

In the Claims

1. (Previously Amended) A high stability, low emission, fuel emulsion composition for a reciprocating engine comprising:

- a) 26 – 50 % by weight purified water;
- b) 50 – 74 % by weight hydrocarbon petroleum distillate;
- c) 2 – 9 % by weight antifreeze; and

said emulsion having an average droplet diameter of about 6 microns to less than about 10 microns.

2. (Cancelled) The fuel emulsion composition of claim 1 wherein said emulsion having an average droplet diameter of between about 5 microns and about 6 microns.

3. (Previously Amended) The fuel emulsion composition of claim 1 comprising 30 - 35 % by weight purified water.

4. (Original) The fuel emulsion composition of claim 1 wherein said purified water is purified using reverse osmosis, distillation, or ion exchange processes.

5. (Original) The fuel emulsion composition of claim 4 wherein said water is purified using reverse osmosis.

6. (Previously Amended) The fuel emulsion composition of claim 1 wherein said hydrocarbon petroleum distillate is high paraffinic having a aromatic content of less than 3%.

7. (Original) The fuel emulsion composition of claim 1 wherein said hydrocarbon petroleum distillate is diesel fuel.

8. (Cancelled) The fuel emulsion composition of claim 1 further comprising:

- c) surfactant;
- d) lubricant;
- e) corrosion inhibitor;
- f) antifreeze; and
- g) ignition delay modifier.

9. (Previously amended) The fuel emulsion composition of claim 1 further including a surfactant that comprises alkylphenolethoxylates, alcohol ethoxylates, fatty alcohol ethoxylates, alkyl amine ethoxylates or mixtures thereof.

10. (Cancelled) The fuel emulsion composition of claim 9 wherein said surfactant is comprised of one or more of the compositions selected from the group consisting of Triton X-102; Tergitol TMN-10; Neodol N1-5; CA-720; NP-9; and Pluronic 17R-2.

11. (Previously Amended) The fuel emulsion composition of claim 1 further including a lubricant that comprises one or more C12 to C22 backbone chains having an adducted acid, wherein each said adducted acid is selected, independently from the other, from the group consisting of mono-phosphoric acid, di-phosphoric acid, tri-phosphoric acid, mono-carboxylic acid, di-carboxylic acid and tri-carboxylic acid.

12. (Original) The fuel emulsion composition of claim 11 wherein said lubricant further comprises an alkanolamine neutralizer.

13. (Original) The fuel emulsion composition of claim 12 wherein said adducted acid is mono- di- or tri-carboxylic acid.

14. (Original) The fuel emulsion composition of claim 12 wherein said alkanolamine neutralizer is amino methyl propanol.

15. (Previously Amended) The fuel emulsion composition of claim 1 further including a corrosion inhibitor that is an aminoalkanoic acid.

16. (Previously Amended) The fuel emulsion composition of claim 1 wherein said antifreeze is an organic alcohol.

17. (Original) The fuel emulsion composition of claim 16 wherein said antifreeze is methanol.

18. (Previously Amended) The fuel emulsion composition of claim 1 further including an ignition delay modifier that comprises one or more compounds selected from the group consisting of nitrates, nitrites and peroxides.

19. (Original) The fuel emulsion composition of claim 18 wherein said ignition delay modifier comprises 2-ethylhexylnitrate.

20. (Original) The fuel emulsion composition of claim 18 wherein said ignition delay modifier comprises ammonium nitrate.

21. (Cancelled) The fuel emulsion composition of claim 8 comprising 67% by weight diesel fuel, 30% by weight purified water, 2% by weight methanol, 0.16% by weight X-102; 0.08% by weight N1-5; 0.08% by weight TMN-10, 0.04% Diacid 1550, 0.06% AMP-95, 0.05% Synkad 828, and 0.37% 2-ethylhexylnitrate.